DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY CONSTRUCTION PERMIT

Permit No. 264CP02
Application No. X-141

The Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues a construction permit to the Permittee, **US Department of the Air Force**. The permit authorizes construction of two new oil-fired boilers and one standby generator as part of the Phase II Repair Utilidor, an additional five new standby generators, and one new jet fuel storage tank at the **Eielson Air Force Base** facility.

This permit satisfies the obligation of the owner and operator to obtain a construction permit as set out in AS 46.14.130(a).

As required by AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this construction permit.

_____ _____

John F. Kuterbach, Manager
Air Permits Program

Date

Table of Contents

List of Abbreviations Used in this Permit

AAC ..... Alaska Administrative Code
ADEC ..... Alaska Department of Environmental Conservation
AS..... Alaska Statutes
ASTM..... American Society of Testing and Materials
CFR ..... Code of Federal Regulations
COMS..... Continuous Opacity Monitoring System
dscf..... Dry standard cubic feet
EPA ..... US Environmental Protection Agency
gr/dscf..... grain per dry standard cubic feet (1 pound = 7000 grains)
GPH..... gallons per hour
HAPS..... Hazardous Air Pollutants [hazardous air contaminants as defined in AS 46.14.990(14)]
ID ..... Source Identification Number
MACT ..... Maximum Achievable Control Technology
Mlb ..... thousand pounds
NESHAPs ..... Federal National Emission Standards for Hazardous Air Pollutants [as defined in 40 CFR 61]
NSPS ..... Federal New Source Performance Standards [as defined in 40 CFR 60]
PPM..... Parts per million
PS ..... Performance specification
PSD ..... Prevention of Significant Deterioration
RM..... Reference Method
SIC..... Standard Industrial Classification
SO_2 ..... Sulfur dioxide
TPH ..... Tons per hour
TPY ..... Tons per year
VOC ..... volatile organic compound [as defined in 18 AAC 50.990(103)]
Wt%..... weight percent

Section 1. Identification

Names and Addresses

Permittee:	**US Department of the Air Force** 2258 Central Ave. Suite 100 Eielson AFB, AK 99702
Facility:	Eielson Air Force Base 2258 Central Ave. Suite 100 Eielson AFB, AK 99702
Location:	64° 41?N; 147° 05?W
Physical Address:	2258 Central Ave. Suite 100 Eielson AFB, AK 99702 (23 road miles southeast of Fairbanks)
Owner:	US Department of the Air Force Eielson Air Force Base 2258 Central Ave. Suite 100 Eielson AFB, AK 99702
Operator:	US Department of the Air Force Eielson Air Force Base 2258 Central Ave. Suite 100 Eielson AFB, AK 99702
Permittee's Responsible Official:	Michael K. Myers, Lt. Col., USAF
Designated Agent:	Steve Stringham 354th Civil Engineering Squadron 2258 Central Ave. Ste 100 Eielson AFB AK 99702-2299

Facility and Building Contact:	Steve Stringham 354th Civil Engineering Squadron US Department of the Air Force Eielson Air Force Base 2258 Central Ave. Suite 100 Eielson AFB, AK 99702 (907) 377-2922
SIC Code of the Facility:	9711 National Security

Section 2. Permit Continuity

1. Except as revised or rescinded herein or as superseded by an Air Quality Permit issued under AS 46.14.170, the Permittee shall comply with terms and conditions of Air Quality Control Permit to Operate No. 9331-AA001 and Construction Permit No. 9831-AC019.

2. If permit terms and conditions listed in this permit conflict with those of Permit No. 9331-AA001 or 9831-AC019, the Permittee shall comply with terms and conditions listed herein.

Section 3. Emission Information and Classification

Emissions of Regulated Air Contaminants, as provided in Permittee's application:

Particulate Matter (PM-10), Sulfur Oxides (SO_2), Nitrogen Oxides (NO_X), Carbon Monoxides (CO), Volatile Organic Compounds (VOC), and Hazardous Air Pollutants (HAP).

Construction Permit Classifications:

The Eielson Air Force Base project requires construction permit provisions requested by the owner or operator under 18 AAC 50.305(a)(3) and (a)(4).

Facility Classifications as described under 18 AAC 50.300(b) through (g), modifications as described under 18 AAC 50.300(h), or owner requested limit classification under 305(a)(1) through (4):

a. Eielson AFB is classified as an Ambient Air Facility as defined in 18 AAC 50.300(b)(1)(B) because it contains fuel burning equipment with a firing rate greater than 50 MMBtu/hr.

b. Eielson Air Force Base is classified as a Prevention of Significant Deterioration (PSD) Major Facility as defined in: (1) 18 AAC 50.300(c)(1) because it has the potential to emit more than 250 tons per year of a regulated air contaminant in an area classified as attainment or unclassifiable; and (2) 18 AAC 50.300(c)(2) because it has the potential to emit more than 100 tons per year of a regulated air contaminant in an area designated attainment or unclassifiable and has a fossil-fuel-fired boiler or combination of boilers that have a fuel burning capacity greater than 250 MMBtu/hr.

c. Eielson Air Force Base is classified as a Hazardous Air Contaminant Major Facility per 18 AAC 50.300(f) because it has the potential to emit 10 tons per year or more of any single hazardous air contaminant or 25 tons per year or more in the aggregate of two or more hazardous air contaminants.

d. This project is classified as a Modification under 18 AAC 50.300(h)(2) because it will increase actual emissions of an air contaminant for which an ambient air quality standard is established.

e. The Permittee has requested limits to avoid the project's classification as a PSD significant modification under 18 AAC 50.300(h)(3) as provided by 18 AAC 50.305(a)(4).

Section 4. Source Inventory and Description

Sources listed below have specific monitoring, record keeping, or reporting conditions in this permit. Source descriptions and ratings are given for identification purposes only. The total facility equipment inventory can be seen in Eielson's June 1999 Title V Permit Application (insignificant sources are not listed).

3. Authorization and Notification Requirements. The Permittee shall modify and operate the facility in accordance with the construction permit application and application supplements listed in Section 17, as may be currently applicable. This permit authorizes the Permittee to:

3.1 Install two low NO_X burner oil-fired boilers (57.8 MMBtu/hr each) Source IDs 7, and 8 at the Auxiliary Heating Plant and remove its three existing boilers, Source IDs 7 (16.2 MMBtu/hr), 8 (16.2 MMBtu/hr), and 9 (22.0 MMBtu/hr) as part of the Phase II Repair Utilidor project;

3.2 Install one 100 kW generator, Source ID 73, for emergency use at the Communications Squadron building (bldg#2268);

3.3 Install one 150 kW emergency backup generator, Source ID 74, at the water treatment plant (bldg 3228);

3.4 Install one 500 kW emergency generator, Source ID 75, for the Utilidor project which will supply emergency heat to the air force base in the event the Main Heat Plant is inoperative;

3.5 Install one 500 kW fuel tank generator, Source ID 76, to pump jet fuel during military operations;

3.6 Install one 500 kW emergency generator, Source ID 77, to upgrade the Fuel Hydrant System;

3.7 Install one 800 kW emergency generator, Source ID 78, at the Joint Mobility Center (JMC); and

3.8 Install one 100,000 bbl JP-8 fuel storage tank with an internal floating roof for vapor control, Source ID 98, at the tank farm.

3.9 **Notification** Upon selection of the generators assigned Source IDs 73 through 78, notify the Department as described in Condition 6.

Table 1: Source Inventory

ID	Source Name	Year Installed	Rating/Size
7*	Auxiliary Heating Plant Boiler #1, Cleaver Brooks (low NO_X burner)	2002	57.8 MMBtu/hr
8*	Auxiliary Heating Plant Boiler #2, Cleaver Brooks (low NO_X burner)	2002	57.8 MMBtu/hr
73	Communications Squadron Emergency Generator	2002	100 kW
74	Water Treatment Facility Generator	2002	150 kW
75	Utilidor Generator	2002	500 kW
76	Fuel Tank Generator	2002	500 kW
77	Fuel Hydrant System Generator	2002	500 kW
78	JMC Generator	2002	800 kW
98	Fuel Tank with internal floating roof	2002	100,000 bbl

* Source ID numbers 7 and 8 were originally assigned to two oil-fired boilers rated at 16.2 MMBtu/hr.

Section 5. Ambient Air Quality Standards and Maximum Allowable Ambient Concentrations

4. **General Description.** This permit contains terms and conditions to ensure that allowable emissions from the facility and associated growth will not cause an ambient concentration that exceeds the concentrations established in Table 6 of 18 AAC 50.310(d)(2) at any location that does not or would not meet the ambient air quality standard or maximum allowable ambient concentration.

5. Notwithstanding the regulations set forth in 18 AAC 50.300(h), the Permittee shall notify the Department, in accordance with the following conditions, prior to:

5.1 Installing a permanent stationary emission unit at the facility that is not listed in Exhibit A of Permit to Operate No. 9831-AC019 or Table 1 of this construction permit; or

5.2 Making a physical or operational change to a source listed in Exhibit A of Permit to Operate No. 9831-AC019 or Table 1 of this construction permit that would cause the design rating, capacity, or throughput to deviate from the description provided in Exhibit A of Permit to Operate No. 9831-AC019 or this construction permit.

6. Provide the Department a written notification of new equipment selection within 30 days after selection. Include a copy of vendor specifications sufficient to list make, model, serial number, maximum fuel firing rate(s), types of fuel the unit is designed to burn and stack parameters (height, exit diameter, exhaust flow-rate and maximum temperature).

7. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain, and operate affected facilities including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Department that may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of affected facilities.

[18 AAC 50.040(a)(1), 1/18/97]
[18 AAC 50.320(a)(2)(A-E), 1/18/97]

Section 6. State Emission Standards

Industrial Processes and Fuel Burning Equipment

Visible Emissions

8. The Permittee shall not cause or allow visible emissions from Source IDs 7, 8, and 73 through 78, excluding condensed water vapor, to reduce visibility through the exhaust effluent by greater than 20% for more than three minutes in any one-hour. Monitor, record and report according to Condition 12, as applicable, and Section 13.

[18 AAC 50.050(a)(2), 1/18/97]
[18 AAC 50.055(a)(1), 1/18/97]
[18 AAC 50.320(a)(2)(A-E), 1/18/97]

Particulate Matter

9. The Permittee shall not cause or allow particulate matter emitted from Source IDs 7, 8, and 73 through 78 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours. Monitor, record and report according to Section 13.

10. Within 180 days after initial startup of Source IDs 73 and 74, conduct a particulate matter emission test of Source IDs 73 and 74, in accordance with Section 10, **or** submit to the Department for approval a demonstration showing that the selected sources can meet the particulate matter standard under 18 AAC 50.055(b)(1).

[18 AAC 50.055(b)(1), 1/18/97]
[18 AAC 50.320(a)(2)(A-E), 1/18/97]

Sulfur Compound Emissions

11. The Permittee shall not cause or allow sulfur compound emissions from Source IDs 7,8, and 73-78, expressed as SO_2, to exceed 500 PPM averaged over three hours.

11.1 For Source IDs 7, 8, and 73 through 78:

a. Burn fuel oil with a sulfur content less than or equal to 0.15% by weight.

b. Obtain a statement of certification from the fuel supplier showing that all fuel oil delivered to the facility complies with Condition 11.1a. If a certificate is not available from the supplier, analyze a representative sample of the fuel for each shipment delivered to the facility to determine the sulfur content using an approved ASTM method such as ASTM D975-94, D3120-92, D4152-90, D2622-91 and ASTM D396-92.

11.2 Report, in accordance with Condition 37, upon receipt of fuel that does not meet the requirements of Condition 11.1a. When reporting under this condition for Source IDs 7, 8, and 73 through 78, include a material balance calculation of the sulfur compound emissions, in PPM, expected from this fuel in accordance with Section 15.

11.3 Report in accordance with Condition 37 if a three-hour exhaust concentration, calculated in Condition 11.2, is greater than 500 PPM.

11.4 Keep records of the statements of certification, each calculated three-hour SO_2 concentration, and all test results and calculations required under Conditions 11.1 and 11.2. Attach copies of all test results and calculations required under Conditions 11.1 and 11.2 to the Operating Report required by Condition 39. Statements of certification do not need to be attached to the facility operating report.

[18 AAC 50.055(c), 1/18/97]
[18 AAC 50.320(a)(2)(A-E), 1/18/97]

Section 7. Federal Emission Standards

Comply with the requirements of 40 CFR 60, New Source Performance Standards (NSPS) as they apply to affected facilities specified below. Notify and report as set out below and as specified in Condition 38.

12. 40 CFR 60, Subpart A, General Provisions: Affected facilities subject to only the record keeping requirements of Subpart Kb are exempt from the requirements of Subpart A. In accordance with 40 CFR 60, Subpart A and 18 AAC 50.040, for each construction, modification, or reconstruction of other affected facilities and sources regulated under 40 CFR 60:

12.1 Notify the Department and EPA:

a. No later than 30 days after construction or reconstruction commencement in accordance with 40 CFR 60.7(a)(1);

b. No more than 15 days after start-up in accordance with 40 CFR 60.7(a)(3);

c. 60 days prior or as soon as practicable before modifying facilities that would be subject to NSPS as set out in 40 CFR 60.7(a)(4);

d. No less than 30 days prior to conducting a demonstration of continuous monitoring system performance as set out in 40 CFR 60.7(a)(5);

e. No less than 30 days prior to anticipated date for conducting opacity observations or using a continuous opacity monitoring system required by 60.11(e)(1), as set out in 40 CFR 60.7(a)(6) and (7);

f. No less than 60 days prior to commencement of reconstruction or replacement of a facility, as defined in 40 CFR 60, notify the Department and EPA with information as set out in 40 CFR 60.15(d).

12.2 For affected facilities regulated under 40 CFR 60, maintain records of occurrence and duration of start-up, shut-down, or malfunction of an affected facility, control equipment, or monitoring equipment as set out in 40 CFR 60.7(b). Submit continuous monitoring system performance reports as set out in 40 CFR 60.7(c) and (d). Maintain a file of measurements as set out in 40 CFR 60.7(e).

12.3 For affected facilities regulated under 40 CFR 60, within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up and at such other times as may be required by the EPA under Section 114 of the U.S. Clean Air Act, conduct performance tests as follows:

a. Notify the Department and EPA at least 30 days in advance of any performance test and opacity observation as set out in 40 CFR 60.8(d) and 60.11(e)(1);

b. Conduct performance tests and data reduction as set out in 40 CFR 60.8(b) and (f);

c. Provide the Department copies of EPA administrator approvals for alternative performance testing;

d. Provide sampling ports and platform(s), safe access to platform(s), and utilities, and conduct testing as set out under 40 CFR 60.8(c) and (e); and

e. Furnish the Department and EPA a copy of the performance test and opacity observations as set out in 40 CFR 60.8(a) and 60.11(e)(2) through (5).

12.4 **Good Air Pollution Control Practice.** At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain, and operate affected facilities including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Department that may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of affected facilities.

12.5 The Permittee is prohibited from concealing a violation of any applicable NSPS standard as set out in 40 CFR 60.12.

13. 40 CFR 60, Subpart Dc, Steam Generating Units – Source IDs 7 and 8:

13.1 Applicability and delegation of authority, 40 CFR 60.40c. An affected facility is a steam-generating unit, which commenced construction, modification, or reconstruction after June 9, 1989, and has a maximum design heat capacity between 10 and 100 MMBtu/hr.

13.2 Standard for sulfur dioxide: On or after the date on which the initial performance test is completed or required to be completed, burn fuel oil with no greater than 0.5% by weight percent sulfur as set out in 40 CFR 60.42c(d). Compliance with the fuel oil sulfur limit under this section may be determined based on a certification from the fuel supplier as specified in 40 CFR 60.42c(h).

13.3 Standard for particulate matter: On or after the date upon which the initial performance test is completed or required to be completed, do not discharge into the atmosphere any gases which exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity as set out in 40 CFR 60.43c(c).

13.4 The fuel oil sulfur limit applies at all times including periods of startup, shutdown, and malfunction as set out in 40 CFR 60.42c(c)(i).

13.5 The opacity standard applies at all times except periods of startup, shutdown, and malfunction as set out in 40 CFR 60.11(c) and 40 CFR 60.43c(d).

13.6 Compliance and performance test methods and procedures for sulfur dioxide, 40 CFR 60.43c:

a. If seeking to determine compliance with the fuel oil sulfur limit based on fuel shipment sampling, the initial performance test shall consist of sampling and analyzing the initial tank of oil to be fired in the unit to demonstrate that fuel oil sulfur content does not exceed 0.5% as set out in 40 CFR 60.44c(g). Thereafter, sample the oil in the tank after each shipment of oil is received as required in 40 CFR 60.46c(d)(2) and Condition 13.8.

b. If seeking to determine compliance with the fuel oil sulfur limit based on fuel supplier certification, the certification shall serve as the performance test as set out in 40 CFR 60.44c(h).

13.7 Compliance and performance test methods and procedures for particulate matter, 40 CFR 60.45c:

a. Conduct an initial performance test as required by 40 CFR 60.8 and Condition 12.3b to determine compliance with the opacity standard set out in Condition 13.3. Use Method 9 (6-minute average of 24 observations as set out in 40 CFR 60.45c(a)(7).

b. Conduct subsequent performance tests as requested by the EPA to determine compliance with the opacity standard as set out in 40 CFR 60.45c(a).

13.8 Emission monitoring for sulfur dioxide, 40 CFR 60.46c:

a. If electing to sample fuel shipments, collect oil samples from the fuel tank immediately after the fuel tank is filled and before any oil is combusted. Analyze the oil to determine the sulfur content. If filling a partially full tank, conduct a new analysis upon filling. Use the results of each analysis to determine the daily average value when determining the 30-day rolling compliance. If the sample is greater than 0.5%, ensure that subsequent shipments of fuel oil are low enough to cause the 30-day rolling average to be 0.5% or less as set out in 40 CFR 60.46c(d)(2).

b. If electing to determine compliance with the 0.5% fuel sulfur limit using fuel supplier certification, then sulfur monitoring under Condition 13.8(a) is not required as specified under 40 CFR 60.46c(e).

13.9 Reporting and record keeping requirements, 40 CFR 60.48c:

a. Include in the construction notification required under 40 CFR 60.7 and Condition 12.1, the information listed in 40 CFR 60.48c(a) consisting of:

(i) The design heat input capacity of the unit and fuel identification;

(ii) Any Federally enforceable requirement that limits the annual capacity factor for any fuel or fuel mixtures; and

(iii) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each fuel fired.

b. Submit to EPA and the Department the performance test data from the initial and subsequent performance tests for fuel sulfur and opacity as set out in 40 CFR 60.48c(b).

c. Submit quarterly reports to EPA and attach a copy to the facility operating report as required by Condition 39. Submit the initial quarterly report postmarked by the 30th day of the third month following completion of the initial performance test. Submit subsequent quarterly reports postmarked by the 30th day following the end of the reporting period. Include the following information as set out in 40 CFR 60.48c(d) and (e):

(i) Calendar dates covered by the reporting period;

(ii) If monitoring fuel sulfur according to Condition 13.8a, include each 30 rolling day average fuel sulfur content calculated during the quarter, ending with the last 30 day period in the quarter. List the reasons for any period of non-compliance;

(iii) Identification of the types of fuel combusted;

(iv) If monitoring fuel sulfur according to Condition 13.8a, include identification whether averages are based on CEMS data or on manual methods; and

(v) If electing to use fuel supplier certification, attach the records of fuel supplier certification and include a certified statement signed by the responsible official of the owner or operator that the records of the fuel supplier certifications submitted represent all of the fuel combusted during the quarter.

d. Ensure that the fuel supplier certification contains the following information for distillate fuel as set out in 40 CFR 60.48c(f):

(i) The name of the oil supplier; and

(ii) A statement from the oil supplier that the oil meets the specifications of fuel oil No. 1 or No. 2, as defined by the American Society for Testing and Materials in ASTM D-396-78.

e. Except as provided for in a U.S. EPA alternative record keeping schedule or waiver, record and maintain records of the amounts of each fuel combusted during each day as set out in 40 CFR 60.48c(g).

f. Maintain the records in accordance with Condition 36 in order to comply with the two-year record retention schedule listed in 40 CFR 60.48c(i). Keep a copy of all EPA issued waivers and alternative schedules with the permit at the facility.

[18 AAC 50.320(a)(2)(A-E), 1/18/97]
[18 AAC 50.040(a)(2)(E), 1/18/97]

14. 40 CFR 60, Subpart Kb, Stationary Tanks – Source ID 98:

14.1 Applicability and designation of affected facility, 40 CFR 60.110b. Volatile organic liquid storage tanks greater than 40 cubic meters in volume (10,567 gallons) for which construction, reconstruction, or modification commenced after July 23, 1984, are subject to this Subpart as listed in 40 CFR 60.110b(a).

14.2 Monitoring of operations, 40 CFR 60.116b. Pursuant to 40 CFR 60.116b(a) and (b), keep readily accessible records showing the dimension of the storage vessels and an analysis showing the capacity of the storage vessel for each storage tank greater than equal to 40 cubic meters (10,567 gallons) for the life of the tank.

[18 AAC 50.320(a)(2)(A-E), 1/18/97]
[18 AAC 50.040(a)(2)(M), 1/18/97]

Section 8. Owner Requested Limits to Avoid Classification as a PSD Major Modification

15. Nitrogen Oxides, Carbon Monoxide, and Sulfur Dioxide Requirements. The Permittee shall avoid classification as a Prevention of Significant Deterioration major modification under 18 AAC 50.300(h)(3)(B)(ii) for NO_X and 18 AAC 50.300(h)(3)(B)(i) for CO as follows:

15.1 Limit the annual hours of operation to 500 hours per 12-month period for the Glide Slope Generator and Source IDs 73 through 78, each.

a. Monitor and record the total monthly hours of operation for Source IDs 73 through 78. Calculate and record the 12-month rolling total hours of operation for each generator.

b. Report in the Operating Report required by Condition 39, the monthly and 12-month rolling total hours of operation for Source IDs 73 through 78, individually.

15.2 Limit the cumulative hours of operation for Sources IDs 7 and 8 to 4464 hours per 12-month rolling period.

a. Monitor and record the cumulative total monthly hours of operation for Source IDs 7 and 8. Calculate and record the cumulative 12-month rolling total hours of operations.

b. Report in the Operating Report required by Condition 39, the cumulative monthly and 12-month rolling total hours of operation for Source IDs 7 and 8.

15.3 Limit the sulfur in distillate fuel oil burned in Sources IDs 7, 8 and 73 through 78 to no more than 0.15 percent by weight.

a. Obtain a statement of certification from the fuel supplier showing that all fuel oil delivered to the facility complies with Condition 11.1a. If a certificate is not available from the supplier, analyze a representative sample of the fuel for each shipment delivered to the facility to determine the sulfur content using an approved ASTM method such as ASTM D975-94, D3120-92, D4152-90, D2622-91 and ASTM D396-92.

b. Keep records of the statements of certification, and all test results and calculations required under Conditions 11.1b and 11.2. Attach copies of the records with the Operating Report required by Condition 39.

[18 AAC 50.320(a)(2), 1/18/97]

Section 9. Generally Applicable Requirements

16. Asbestos NESHAP. The Permittee shall comply with the requirements set forth in 40 CFR 61.145, 61.150, and 61.152, and the applicable sections set forth in 40 CFR 61, Subpart A and Appendix A.

[18 AAC 50.040(b)(3), 1/18/97]
[18 AAC 50.320(a)(2), 1/18/97]
[Federal Citation: 40 CFR 61, Subpart M, 12/19/96]

17. Refrigerant Recycling and Disposal. The Permittee shall comply with the standards for recycling and emission reduction of refrigerants set forth in 40 CFR 82, Subpart F.

[18 AAC 50.040(d), 1/18/97]
[18 AAC 50.320(a)(2), 1/18/97]
[Federal Citation: 40 CFR 82, Subpart F, 7/1/97]

18. Good Air Pollution Control Practice. The Permittee shall install, maintain and operate, in accordance with manufacturer's procedures, fuel burning equipment, process equipment, emission control devices, testing equipment and monitoring equipment to provide optimum control of air contaminant emissions during all operating periods. This condition is not federally-enforceable.

[18 AAC 50.030, 1/18/97]
[18 AAC 50.320(a)(2)(A), 1/18/97]

19. Dilution. The Permittee shall not dilute emissions with air to comply with this permit.

[18 AAC 50.045(a), 1/18/97]

19.1 Check all ductwork and exhaust systems for leaks, and repair any leaks found:

a. No sooner than 30 days prior to conducting a source test to demonstrate compliance with this permit;

b. Once during the first six months of this permit and every 17,520 hours of source operation thereafter for sources subject to visible emission observations conducted pursuant to Section 14; or

c. Once during the life of this permit for any other source regulated by this permit.

[18 AAC 50.320(a)(2), 1/18/97]

19.2 Keep records of all inspections and repairs performed under this condition.

[18 AAC 50.320(a)(2)(D), 1/18/97]

19.3 Upon request of the Department, submit copies of the records.

[18 AAC 50.320(a)(2)(E), 1/18/97]

20. Modification. The Permittee shall not construct, operate, or modify a source that will result in a violation of the applicable emission standards or that will interfere with the attainment or maintenance of the ambient air quality standards or maximum allowable ambient concentrations.

[18 AAC 50.045(c), 1/18/97]
[18 AAC 50.320(a)(2), 1/18/97]

20.1 Obtain all permits or permit revisions required for construction, modification, or operation under 18 AAC 50 and AS 46.14.

[18 AAC 50.320(a)(2), 1/18/97]

20.2 Comply with the conditions of all permits obtained under 18 AAC 50 and AS 46.14.

[18 AAC 50.320(a)(2), 1/18/97]

21. Bulk Materials Handling, Construction and Industrial Activities. The Permittee shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air as a result of industrial activities, construction projects, or the handling, transportation, and storage of bulk materials.

[18 AAC 50.040(e) & 18 AAC 50.045(d), 1/18/97]
[18 AAC 50.320(a)(2), 1/18/97]

21.1 For the utilidor repair project, keep records describing all precautions taken to prevent particulate matter from becoming airborne due to any of the activities described in this condition. If the precautions taken by the Permittee are not listed in the State Air Quality Control Plan, also record a statement describing why the Permittee finds the precaution reasonable. Reasonable precautions, as listed in the State Air Quality Control Plan, include:

a. Installation and use of hoods, fans, and dust collectors to enclose and vent the handling of dusty materials;

b. Use of water or chemicals for dust control in the demolition of existing structures, construction operations, road grading, or land clearing; and

c. Application of asphalt, water, or suitable chemicals on dirt roads, material stockpiles and other surfaces which can create airborne dusts.

[18 AAC 50.040(e) & 18 AAC 50.320(a)(2)(A-E), 1/18/97]

21.2 At least once each month during active construction of the Utilidor Repair Project, perform visual surveys of fugitive particulate matter sources as follows:

a. Conduct a survey of all bulk materials handling, construction and industrial activities for the potential of airborne particulate matter in accordance with the procedures listed in 40 CFR 60, Appendix A, RM 22.

b. Within 2 days of discovering that particulate matter emissions are leaving the property at a level which potentially could unreasonably interfere with the enjoyment of life or property, be injurious to human health or welfare, animal or plant life, or property, or cause an exceedance of a PM-10 ambient air quality standard or increment contained in 18 AAC 50.010(1) or 18 AAC 50.020(b)(2), initiate corrective actions to prevent emissions from leaving the property.

c. Keep contemporaneous records of all visual surveys performed and corrective actions taken to prevent particulate matter emissions from leaving the property. Submit summaries of the records with the report required by Condition 39 of this permit.

d. Submit a report in accordance with Condition 37 whenever a visual survey reveals that particulate matter emissions at levels specified in Condition 21.2b are leaving the property.

[18 AAC 50.320(a)(2)(A-E), 1/18/97]

22. Stack Injection. The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, unless approved in writing by the Department.

[18 AAC 50.055(g) & 18 AAC 50.310(m), 1/18/97]

23. Open Burning. The Permittee shall comply with the following requirements when conducting open burning at the facility:

23.1 Open burning of asphalts, rubber products, plastics, tars, oils, oily wastes, contaminated oil cleanup materials, or other materials in a way that gives off black smoke is prohibited without written approval of the Department in accordance with the procedures set forth in 18 AAC 50.065.

[18 AAC 50.040(e) & 18 AAC 50.065(b), 1/18/97]
[18 AAC 50.320(a)(2), 1/18/97]

23.2 Open burning or incineration of pesticides, halogenated organic compounds, cyanic compounds, or polyurethane products in a way that gives off black smoke or acidic gases or particulate matter is prohibited.

[18 AAC 50.040(e) & 18 AAC 50.065(b), 1/18/97]
[18 AAC 50.320(a)(2), 1/18/97]

23.3 Open burning of putrescible garbage, animal carcasses, or petroleum-based materials, including materials contaminated with petroleum or petroleum derivatives, is prohibited if it causes odor or black smoke that has an adverse effect on nearby persons or property.

[18 AAC 50.040(e) & 18 AAC 50.065(b), 1/18/97]
[18 AAC 50.320(a)(2), 1/18/97]

23.4 Open burning is prohibited in an area if the Department declares an air quality advisory under 18 AAC 50.245, stating that open burning is not permitted in that area for the day.

[18 AAC 50.040(e) & 18 AAC 50.065(b), 1/18/97]
[18 AAC 50.320(a)(2), 1/18/97]

23.5 When conducting open burning, the Permittee shall ensure that:

a. The material is kept as dry as possible through the use of cover or dry storage;

b. Before igniting the burn, noncombustibles are separated to the greatest extent practicable;

c. Natural or artificially induced draft is present;

d. To the greatest extent practicable, combustibles are separated from grass or peat layer;

e. Combustibles are not allowed to smolder; and

f. Sufficient written records are kept to demonstrate that the Permittee complies with the limitations in this condition. Upon request of the Department, submit copies of the records.

[18 AAC 50.040(e), 18 AAC 50.065(a), & 18 AAC 50.335(g – h), 1/18/97 & 6/21/98]
[18 AAC 50.320(a)(2), 1/18/97]

24. Air Pollution Prohibited. The Permittee shall not cause any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.110, 5/26/72]
[18 AAC 50.040(e), 1/18/97]
[18 AAC 50.320(a)(2), 1/18/97]

24.1 Within 24 hours of receiving a complaint that is attributable to emissions from the facility, investigate the complaint and initiate corrective actions to alleviate or eliminate the cause of the complaint.

[18 AAC 50.320(a)(2)(A-C), 1/18/97]

24.2 Keep records of the date, time, and nature of all complaints received and summary of the investigation and corrective actions undertaken for complaints attributable to emissions from the facility. Upon request of the Department, submit copies of the records.

[18 AAC 50.320(a)(2)(D-Ei), 1/18/97]

25. Technology-Based Emission Standard. If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235, causes emissions in excess of a technology-based emission standard listed in Conditions 16 and 17, the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard.

[18 AAC 50.235(a), 1/18/97]
[18 AAC 50.320(a)(2), 1/18/97]

Section 10. General Source Testing and Monitoring Requirements

26. Requested Source Tests. In addition to any source testing explicitly required by this permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.

[18 AAC 50.220(a), 18 AAC 50.345(a)(10), 1/18/97]

27. Operating Conditions. Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing:

27.1 At a point or points that characterize the actual discharge into the ambient air; and

27.2 At the maximum rated burning or operating capacity of the source or another rate determined by the Department to characterize the actual discharge into the ambient air.

[18 AAC 50.220(b) & (c), 1/18/97]
[18 AAC 50.320(a)(2)(A-C), 1/18/97]

28. Reference Test Methods. The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:

28.1 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 CFR 60.

[18 AAC 50.220(b) & (c), 1/18/97]
[18 AAC 50.320(a)(2)(A-C), 1/18/97]

28.2 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 CFR 61.

[18 AAC 50.220(b) & (c), 1/18/97]
[18 AAC 50.320(a)(2)(A-C), 1/18/97]

28.3 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 CFR 63.

[18 AAC 50.220(b) & (c), 1/18/97]
[18 AAC 50.320(a)(2)(A-C), 1/18/97]

28.4 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Section 14 of this permit. Visibility source testing is exempt from the requirements listed in Conditions 30 though 32. Except as otherwise directed by the Department, attach visible emission source testing results to the Facility Operating Report required by Condition 39 of this permit.

[18 AAC 50.220(b) & (c), 1/18/97]
[18 AAC 50.320(a)(2)(A-C), 1/18/97]

28.5 Source testing for emissions of particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified 40 CFR 60, Appendix A.

[18 AAC 50.220(b) & (c), 1/18/97]
[18 AAC 50.320(a)(2)(A-C), 1/18/97]

28.6 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 CFR 51, Appendix M.

[18 AAC 50.220(b) & (c), 1/18/97]
[18 AAC 50.320(a)(2)(A-C), 1/18/97]

28.7 Source testing for emissions of any contaminant may be determined using an alternative method approved by the Department in accordance with Method 301 in Appendix A to 40 CFR 63.

[18 AAC 50.220(b) & (c), 1/18/97]
[18 AAC 50.320(a)(2)(A-C), 1/18/97]

29. Excess Air Requirements. To determine compliance with this permit, standard exhaust gas volumes must only include the volume of gases formed from the theoretical combustion of fuel, plus the excess air volume normal for the specific source type, corrected to standard conditions (dry gas at 70° F and an absolute pressure of 760 millimeters of mercury).

[18 AAC 50.220(b) & (c), 1/18/97]
[18 AAC 50.320(a)(2)(A-C), 1/18/97]
[18 AAC 50.990(88), 1/18/97]

30. Test Plans. Before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance, and must specify how the source will operate during the test and how the Permittee will document this operation. A complete plan must be submitted within 60 days of receiving a request under Condition 26 and at least 30 days before the scheduled date of any tests.

[18 AAC 50.345(a)(10), 1/18/97]
[18 AAC 50.320(a)(2), 1/18/97]
[18 AAC 50.320(a)(2)(A-C), 1/18/97]

31. Test Notification. At least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and time the source test will begin.

[18 AAC 50.345(a)(10), 1/18/97]
[18 AAC 50.320(a)(2), 1/18/97]
[18 AAC 50.335(g), 1/18/97]

32. Test Reports. Within 45 days after completing a source test, the Permittee shall submit two copies of the results, to the extent practical, in the format set out in the *Source Test Report Outline* of Volume III, Section IV.3 of the State Air Quality Control Plan, adopted by reference in 18 AAC 50.030(8). The Permittee shall certify the results as set out in Condition 33 of this permit.

[18 AAC 50.345(a)(10), 1/18/97]
[18 AAC 50.320(a)(2), 1/18/97]
[18 AAC 50.320(a)(2)(D), 1/18/97]

Section 11. General Record Keeping, Reporting, and Compliance Certification Requirements

33. Certification. The Permittee shall certify all reports, compliance certifications, or other documents submitted to the Department under this permit by including the signature of a responsible official for the permitted facility following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." For the same six-month reporting period, the excess emission reports submitted pursuant to Condition 37 may be certified with the operating report required by Condition 39 of this permit. All other reports must be certified upon submittal.

[18 AAC 50.205, 1/18/97]
[18 AAC 50.345(a)(9), 1/18/97]
[18 AAC 50.320(a)(2) & 18 AAC 50.320(a)(2)(E), 1/18/97]

34. Submittals. Unless otherwise directed by the Department or this permit, the Permittee shall send reports, compliance certifications, and other documents required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician.

[18 AAC 50.320(a)(2)(E), 1/18/97]

35. Information Requests. The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by this permit. The Department, in its discretion, will require the Permittee to furnish copies of those records directly to the federal administrator.

[18 AAC 50.200, 1/18/97]
[18 AAC 50.345(a)(8), 1/18/97]
[18 AAC 50.320(a)(2) & 18 AAC 50.320(a)(2)(A-E), 1/18/97]

36. Record Keeping Requirements. The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:

36.1 Copies of all reports and certifications submitted pursuant to this Section of this permit.

36.2 Records of all monitoring required by this permit, and information about the monitoring including:

a. Calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;

b. Sampling dates and times of sampling and measurements;

c. The operating conditions that existed at the time of sampling or measurement;

d. The date analyses were performed;

e. The location where samples were taken;

f. The company or entity that performed the sampling and analyses;

g. The analytical techniques or methods used in the analyses; and

h. The results of the analyses.

[18 AAC 50.320(a)(2)(D), 1/18/97]

37. Excess Emission and Permit Deviation Reports. The Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit or that present a potential threat to human health or safety as soon as possible, but no later than 48 hours, after the event commences. The report must include the information listed on the form contained in Section 16 of this permit. The Permittee may use this form to report emissions under this condition.

[18 AAC 50.235(a)(2) & 18 AAC 50.240(c), 1/18/97]
[18 AAC 50.320(a)(2)(E), 1/18/97]

38. NSPS and NESHAP Reports. The Permittee shall submit to the Department copies of reports required by Conditions 12 through 14, and 16 as they apply to the facility as follows:

38.1 Attach a copy of any NSPS and NESHAPs reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10 to the Operating Report required by Condition 39.

38.2 The Permittee shall notify the Department of any EPA granted waivers of NSPS or NESHAPs emission standards, record keeping, monitoring, performance testing, or reporting requirements within 30 days after the Permittee receives a waiver.

[18 AAC 50.040, 1/18/97]
[Federal Citation 40 CFR 60 & 40 CFR 61, 7/1/97]

39. Operating Reports. Submit an original and a copy of the operating report as set out in Condition 26 of Permit No. 9831-AC019. This report must include copies of the records required to be reported by the conditions of this permit. In addition, the report must include a listing of all deviations from the requirements of this permit that occurred during the reporting period. For each deviation, the report must identify:

39.1 The date of the deviation;

39.2 The equipment involved;

39.3 The permit condition;

39.4 A description of the deviation; and

39.5 Any corrective action or preventive measures taken and the date of such actions.

[18 AAC 50.320(a)(2)(A-E), 1/18/97]

Section 12. Standard Conditions Not Otherwise Included in the Permit

40. Consistent with Alaska law, for purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any standard in this permit, nothing in this permit precludes the use of any credible evidence of information relevant to whether the facility would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

[18 AAC 50.320(a)(2), 1/18/97]
[Federal Citation: 40 CFR 52.12(c), 7/1/99]

41. The Permittee must comply with each permit term and condition. Noncompliance constitutes a violation of AS 46.14, 18 AAC 50, and the Clean Air Act, except for those requirements designated as not federally-enforceable, and is grounds for:

41.1 An enforcement action;

41.2 Permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or

41.3 Denial of a construction permit renewal application.

[18 AAC 50.345(a)(1), 1/18/97]
[18 AAC 50.320(a)(1), 1/18/97]

42. It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

[18 AAC 50.345(a)(2), 1/18/97]
[18 AAC 50.320(a)(2), 1/18/97]

43. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of this permit.

[18 AAC 50.345(a)(3), 1/18/97]
[18 AAC 50.320(a)(2), 1/18/97]

44. Compliance with permit terms and conditions is considered to be compliance with those requirements that are:

44.1 Included and specifically identified in the permit; or

44.2 Determined in writing in the permit to be inapplicable.

[18 AAC 50.345(a)(4), 1/18/97]
[18 AAC 50.320(a)(2), 1/18/97]

45. The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any construction permit condition.

[18 AAC 50.345(a)(5), 1/18/97]
[18 AAC 50.320(a-c), 1/18/97]

46. The permit does not convey any property rights of any sort, nor any exclusive privilege.

[18 AAC 50.345(a)(6), 1/18/97]
[18 AAC 50.320(b), 1/18/97]

47. The Permittee shall allow an officer or employee of the Department or an inspector authorized by the Department, upon presentation of credentials and at reasonable times with the consent of the owner or operator, to:

47.1 Enter upon the premises where a source subject to the construction permit is located or where records required by the permit are kept;

47.2 Have access to and copy any records required by the permit;

47.3 Inspect any facilities, equipment, practices, or operations regulated by or referenced in the permit; and

47.4 Sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

[18 AAC 50.345(a)(7), 1/18/97]
[18 AAC 50.320(a)(2), 1/18/97]

Section 13. Visible Emissions and Particulate Matter Monitoring Plan

Visible Emissions Observations

48. Initial VE Testing using Method 9 Plan required. Initial VE readings are required for Source IDs 7 and 8 and 75 through 78 as follows.

48.1 For Source IDs 7 and 8, conduct an initial visible emission (VE) reading in accordance with Condition 49 and Section 14 within the timeframe specified in Condition 12.3.

48.2 For each of Source IDs 75 through 78, conduct an initial VE reading in accordance with Condition 49 and Section 14 within 180 days after startup of the source.

49. Periodic Monitoring Requirements. For Source IDs 7 and 8 and 73-78, Conduct Periodic Monitoring using either the "Method 9 Plan" specified in Condition 49.1, **or** the "Smoke/No Smoke Plan" specified in Condition 49.2

49.1 **Method 9 Plan.** Perform a VE reading as follows for every 1000 hours of a source's operation or within 7 days of switching from the "Smoke/No Smoke Plan" specified in Condition 49.2.

a. Observe the source's exhaust for 6 minutes to obtain 24 individual 15-second readings in accordance with Section 14 of this permit; and

b. If two or more individual 15-second readings during the six-minute observation period are greater than 20 percent opacity, then continue the Method 9 observations for an additional 12 minutes for a total of 18 minutes.

c. If four or more individual 15-second readings during the 18-minute observation period are greater than 20 percent opacity, then continue the Method 9 observations for an additional 42 minutes for a total of 60 minutes.

d. The Permittee may reduce the number of 60 minute observations required by Condition 49.1 to one observation for every 4,380 hours of source operation, provided

(i) 60 minutes of observations were not necessary under Condition 49.1c; or

(ii) the source was observed for 60 minutes and no more than 8 individual 15-second readings were greater than 20 percent opacity.

e. If a source is observed for 60 minutes and more than eight, but fewer than thirteen 15-second readings are greater than 20 percent opacity during the most recent observation, then the observation frequency under Condition 49.1 must be increased to or maintained at once every 1000 hours of source operation.

49.2 **Smoke/No Smoke Plan.** During each calendar day that a source operates, observe the exhaust for the presence or absence of visible emissions, excluding condensed water vapor. Record the following information in a written log for each observation and submit copies of the records upon the request of the Department:

a. The date and time of the observation;

b. From Table 1 of this permit, the ID of the source observed;

c. Whether visible emissions are present or absent in the exhaust;

d. If the source starts operation on the day of the observation, the startup time of the source; and

e. Name, title, and signature of the person making the observation.

f. The Permittee may reduce the number of visible emission observations required by Condition 49.2 to one observation for every 30 days of source operation if the source operates without visible emissions in the exhaust during the most recent 30 days of operation.

Corrective Actions Based on Visible Emissions Observations

50. If visible emissions are present in the exhaust during an observation performed under Condition 49.2, the Permittee shall:

50.1 Take actions to reduce visible emissions from the source within 24 hours of the observation;

50.2 Keep a written record of the starting date, the completion date, and a description of the actions taken to reduce visible emissions;

50.3 After completing the actions taken to reduce visible emissions, observe the visible emissions in accordance with Condition 49.2 at a frequency of at least once per day for the next 30 calendar days that the source operates, and continue according to the optional schedule set out in Condition 49.2f; and

50.4 If visible emissions are present in the exhaust or if subsequent visible emissions are observed under the schedule set out in Condition 50.3, then observe the exhaust in accordance with Condition 49.1 until written approval has been received from the Department to resume observations under Condition 49.2.

Particulate Matter Testing

51. The Permittee shall conduct tests to determine the concentration of particulate matter in the exhaust of Source IDs 7, 8, and 73 through 78 as follows:

51.1 Conduct tests according to the requirements set out in Section 10 of this permit;

51.2 Conduct a test no later than 90 days after any time a 60 minute visible emission observation performed under this Section results in:

a. 13 or more 15-seconds readings with an opacity greater than 20%; or

b. A 6-minute average opacity that is greater than 12% for a source with an exhaust stack diameter that is less than 21 inches.

51.3 During each test, observe visible emissions in accordance with Section 14 and calculate the average opacity that was measured during the test. Submit the results of the visible emission observations and the calculation with the source test report.

Reporting Requirements

52. The Permittee is not required to comply with Conditions 30, 31 and 32 when observing visible emissions under this section.

53. Within 60 days of installing Source IDs 7, 8 and 73 through 78, the Permittee shall measure the exhaust stack diameter of each unit and submit information to the Department.

54. The Permittee shall keep a record of the operating hours for each Source IDs 7, 8 and 73 through 78, and submit these records with the report required by Condition 39.

55. For all 60-minute visible emissions observations that occurred during an applicable reporting period, the Permittee shall submit copies of observation results with the report required by Condition 39.

56. The Permittee shall submit an Excess Emission Report in accordance with Condition 37 if:

56.1 A 60-minute visible emission observation results in:

a. 13 or more 15-seconds readings with an opacity greater than 20%;

b. A six-minute average opacity that is greater than 12% for a source with an exhaust stack diameter that is less than 21 inches; or

c. The results of a test for particulate matter exceed the particulate matter emission limit.

[18 AAC 50.320(a)(2)(A-E), 1/18/97]

Section 14. Visible Emission Evaluation Procedures

An observer qualified according to 40 CFR 60, RM 9 shall use the following procedures to determine the reduction of visibility through the exhaust effluent.

Position. The qualified observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented in the 140? sector to his back. Consistent with maintaining the above requirement, the observer shall, as much as possible, make his observations from a position such that his line of vision is approximately perpendicular to the plume direction and, when observing opacity of emissions from rectangular outlets (e.g., roof monitors, open baghouses, noncircular stacks), approximately perpendicular to the longer axis of the outlet. The observer's line of sight should not include more than one plume at a time when multiple stacks are involved, and in any case the observer should make his observations with his line of sight perpendicular to the longer axis of such a set of multiple stacks (e.g., stub stacks on baghouses). The observer shall maintain a distance of at least 15 feet from the emission point.

Field Records. The observer shall record the name of the plant, emission location, facility type, observer's name and affiliation, and the date on the Visible Emissions Field Data Sheet. The time, estimated distance to the emission location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), and plume background are recorded on the sheet at the time opacity readings are initiated and completed.

Observations. Opacity observations shall be made at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. The observer shall not look continuously at the plume but instead shall observe the plume momentarily at 15-second intervals. Unless directed to do otherwise in this permit, observe emissions for 60 consecutive minutes to obtain a minimum of 240 observations.

Attached Steam Plumes. When condensed water vapor is present within the plume as it emerges from the emission outlet, opacity observations shall be made beyond the point in the plume at which condensed water vapor is no longer visible. The observer shall record the approximate distance from the emission outlet to the point in the plume at which the observations are made.

Detached Steam Plume. When water vapor in the plume condenses and becomes visible at a distinct distance from the emission outlet, the opacity of emissions should be evaluated at the emission outlet prior to the condensation of water vapor and the formation of the steam plume.

Recording Observations. Opacity observations shall be recorded to the nearest 5 percent at 15-second intervals on the Visible Emissions Observation Record contained in this section. Record the minimum number of observations required by the permit. Each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period.

Data Reduction. To determine compliance with a standard set out in Condition 8 of this permit, count the number of observations that exceed 20 percent opacity and record this number on the sheet.

To determine the six-minute average opacity set out in Condition 51.2b of this permit, divide the observations recorded on the record sheet into sets of 24 consecutive observations. Sets need not be consecutive in time and in no case shall two sets overlap. For each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24. If an applicable standard specifies an averaging time requiring more than 24 observations, calculate the average for all observations made during the specified time period. Record the average opacity on the sheet.

Visible Emissions Field Data Sheet

Certified Observer:_____

Company: _____

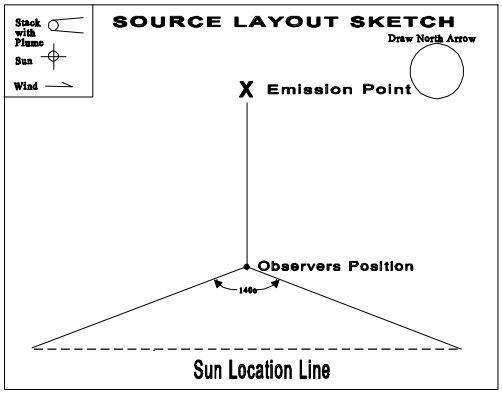
Location: _____

Test No.: _____ Date: _____

Source: _____

Production Rate, Operating Rate & Unit Operating Hours: _____

Hrs. of observation: _____



Clock Time	Initial				Final
Observer location Distance to discharge					
Direction from discharge					
Height of observer point					
Background description					
Weather conditions Wind Direction					
Wind speed					
Ambient Temperature					
Relative humidity					
Sky conditions: (clear, overcast, % clouds, etc.)					
Plume description: Color					
Distance visible					
Water droplet plume? (attached or detached?)					
Other information					

Visible Emissions Observation Record

Page ___ of ___

Company _____ Certified Observer_____

Test Number _____ Clock time_____

Date:		Visibility reduction every 15 Seconds (Opacity)				Steam Plume (check if applicable)		Comments
Hr	Min	0	15	30	45	Attached	Detached	

Additional information:

_____
Observer Signature

Data Reduction:
Duration of Observation Period (minutes) _____
Number of Observations _____
Number of Observations exceeding 20% _____

Average Opacity Summary

Set Number	Time Start—End	Opacity	
		Sum	Average

Section 15. Material Balance Calculation

If the sulfur content of a liquid fuel shipment is greater than 0.15% by weight, calculate the three-hour exhaust concentration of SO_2 using the following equations:

A = 31,200 X [**wt%S_{fuel}**] = 31,200 X _____ = _____

B = 0.148 X [**wt%S_{fuel}**] = 0.148 X _____ = _____

C = 0.396 X [**wt%C_{fuel}**] = 0.396 X _____ = _____

D = 0.933 X [**wt%H_{fuel}**] = 0.933 X _____ = _____

E = B + C + D = _____ + _____ + _____ = _____

F = 21 – [**vol%$_{dry}O_{2,\ exhaust}$**] = 21 - _____ = _____

G = [**vol%$_{dry}O_{2,\ exhaust}$**] ? F = _____ ? _____ = _____

H = 1 + G = 1 + _____ = _____

I = E x H = _____ x _____ = _____

SO_2 concentration = A ? I = _____ ? _____ = _____ PPM

The **wt%S_{fuel}**, **wt%C_{fuel}**, and **wt%H_{fuel}** are equal to the weight percents of sulfur, carbon, and hydrogen in the fuel. These percentages should total 100%.

The fuel weight percent (wt%) of sulfur is obtained pursuant to Condition 11.1. The fuel weight percents of carbon and hydrogen are obtained from the fuel refiner.

The volume percent of oxygen in the exhaust (**vol%$_{dry}O_{2,\ exhaust}$**) is obtained from oxygen meters, manufacturer's data, or from the most recent ORSAT analysis at the same engine load used in the calculation.

Enter all of the data in percentages without dividing the percentages by 100. For example, if **wt%S_{fuel}** = 1.0%, then enter 1.0 into the equations not 0.01 and if **vol%$_{dry}O_{2,\ exhaust}$** = 3.00%, then enter 3.00, not 0.03.

[18 AAC 50.350(g), 1/18/97]

Section 16. ADEC Notification Form

Fax this form to: (907) 269-7508 Telephone: (907) 269-8888

US Department of the Air Force
Company Name

Eielson Air Force Base
Facility Name

1. Reason for notification:

✍ **Excess Emission** † **Permit Condition Exceedence**

2. Event Information (Use 24-hour clock)**:**

	START Time**:** (hr:min):	**END** Time:	**Duration**
Date: _____	_____:_____	_____:_____	_____:_____
Date: _____	_____:_____	_____:_____	_____:_____
		Total:	_____:_____

3. Cause of Event (Check all that apply)**:**

† START UP † UPSET CONDITION † CONTROL EQUIPMENT
† SHUT DOWN † SCHEDULED MAINTENANCE † OTHER _____

Attach a detailed description of what happened, including the parameters or operating conditions exceeded.

4. Sources Involved:

Identify each Emission Source involved in the event, using the same identification number and name as in the Permit. List any Control Device or Monitoring System affected by the event. Attach additional sheets as necessary.

Source ID No.	Source Name	Description	Control Device
_____	_____	_____	_____
_____	_____	_____	_____

5. Emission Limit and/or Permit Condition Exceeded:

Identify each Emission Standard and Permit Condition exceeded during the event. Attach a list of ALL known or suspected injuries or health impacts. Attach additional sheets as necessary.

Permit Condition	Limit	Exceedence
_____	_____	_____
_____	_____	_____

6. Emission Reduction:

Attach a detailed description of ALL of the measures taken to minimize and/or control emissions during the event.

7. Corrective Actions:

Attach a detailed description of ALL corrective actions taken to restore the system to normal operation.

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name: Signature: Date:

Section 17. Permit Documentation

December 1, 1998	Air Quality Construction Permit No. 9831-AC019
February 16, 2001	Letter from Sara Head of ENSR to James Baumgartner of ADEC
June 7, 2001	Letter from Sara Head of ENSR to James Baumgartner of ADEC
June 14, 2001	Letter from Sara Head of ENSR to James Baumgartner of ADEC
June 27, 2001	Letter from James Baumgartner of ADEC to Sara Head of ENSR Re: Eielson Air Force Base-Proposed New Air Emission Sources
June 27, 2001	Letter from James Baumgartner of ADEC to Sara Head of ENSR Re: Eielson AFB-Proposed Glide Slope 60 kW Generator Ambient Air Quality Modeling Analysis/Report.
November 9, 2001	Air Quality Construction & Operating Permit Application
January 15, 2002	Air Quality Construction & Operating Permit Application REVISION 1
February 11, 2002	ADEC application incompleteness letter to Steve Stringham of Eielson AFB
February 18, 2002	ENSR letter to ADEC, RE: Response to Incompleteness Determination, Application X-141, Eielson AFB
March 14, 2002	HMH letter to ADEC, response to comments from Julie Ackerlund
May 6, 2002	Letter from Lieutenant Colonel Michael K. Myers of Eielson AFB to James Baumgartner of ADEC. RE: Comments on preliminary decision.